UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, MONTANA OFFICE
FEDERAL BUILDING, 301 S. PARK, DRAWER 10096
HELENA, MONTANA 59626-0096

INSPECTION REPORT

FACILITY: ASARCO East Helena Plant
P.O. Box 1230, E. Helena, MT 59635
EPA ID # MTD 006 230 346
Telephone (406) 227-7191

RESPONSIBLE OFFICIAL: Jon Nickel, Environmental Supervisor
Brad Brough, Environmental Engineer

INSPECTION PARTICIPANTS: Richard Knatterud and Bill Potts, WMD; and Susan Zazzali, EPA

DATE OF INSPECTION: August 29, 1995

PURPOSE OF INSPECTION: To evaluate ASARCO's compliance with RCRA requirements. This was the second part of a two-part RCRA inspection. The first part of the inspection was conducted January 5, 1995. The second portion of the inspection focused on the regulatory status of ASARCO as a conditionally exempt small quantity generator. Additionally the team followed up on questions raised during the first inspection regarding the regulatory status of secondary materials stored and smelted onsite by ASARCO, and the waste water tank system.

FACILITY DESCRIPTION: ASARCO is a primary lead smelter occupying approximately 80 acres in East Helena, Montana. The smelter has been in operation since the late 1800s. The smelter produces primary lead bullion and copper matte and speiss which are further refined at other ASARCO facilities. Source materials for the smelter include virgin ores (60-70% from South America) as well as non-virgin (secondary) metal-bearing materials. The facility also operates an acid plant which produces 93% food grade sulfuric acid.

RESULTS OF INSPECTION: The inspection team arrived at the ASARCO facility at approximately 8:30 AM and met with Jon Nickel and Brad Brough to discuss the purpose of our visit. Our expressed purpose was to discuss the following topics: 1. waste generation activities; 2. follow up on the January inspection by visiting the filter cake storage area, the secondary materials storage area, the tank areas and the street sweepings disposal area east of the plant. The day was clear and hot with the temperature in the low eighties fahrenheit by midday. A strong wind picked up around 10:00 AM.

Waste Generation Activities - The inspection team met with Keith Kramlick the laboratory supervisor at the lab. Mr. Potts asked about lab solvent usage and waste disposal practices. Mr. Kramlick informed us that the lab routinely uses isopropyl alcohol as a solvent and on rare occasion acetone. They are in the process of eliminating the use of acetone entirely. The isopropyl alcohol is applied to a wipe and used to clean markings off of glassware. Mr. Kramlick estimated that they generated two or three wipes a day. The wipes are placed in trash containers marked "paper wastes." The trash containers are emptied into a dumpster behind the lab, the contents of which are eventually sent to the blast furnace.

Mr. Kramlick then explained the assay process. Samples of lead ore are placed in furnace where gold and silver are absorbed by the lead. The molten lead is then poured into molds to form lead "buttons." As the buttons solidify a slag is formed. This slag is placed into a waste container in the furnace area. At the time of our inspection there was slag on the floor of the furnace room. Next the lead buttons are then placed in a cupel. The cupels are then placed in the furnace where the lead is absorbed by the cupel and the gold and silver are left behind. The spent cupels are placed in the waste container with the slag. The waste container is emptied into the dumpster. Eventually all the materials in the dumpster are sent to the blast furnace.

Other wastes generated in the lab are spent lab chemicals. These are mainly dilute acids. Mr. Kramlick estimated that the lab generated on a monthly basis approximately two gallons of hydrochloric acid, approximately half a gallon of nitric acid, and approximately a quarter of a gallon of sulfuric acid. All the spent lab chemicals are flushed down the drain and treated in the plant water treatment system.

The dumpster behind the lab was approximately two thirds full with a total capacity of approximately three cubic yards. There were used cupels, slag, plastic, styrofoam, paper, and cardboard in the dumpster at the time of the inspection. All of the materials were destined for the blast furnace. Mr. Nichol stated that under Montana Solid Waste rules ASARCO was allowed to dispose of household type waste in the blast furnace.

ASARCO maintains a large variety of vehicles and generates used motor oils. The used oil is stored in a bermed and covered storage area. At the time of the inspection several barrels were tipped over and leaking oil on the floor of the containment area. Mr. Nichol stated that the spilled barrels were not there the previous day and he could not be sure that they contained only used oil.

The inspection team also toured the mechanical shop, the electrical shop, the paint shop and the mechanic's shop. Metal fabrication work is done in the mechanical shop. There was a small parts cleaner that used Stoddard solvent. The parts

cleaner is a basin with a pump on top of a 55 gallon drum. The supply of solvent in the cleaner typically lasts a year. Mr. Nichol stated that they keep logs documenting the shipment of the used solvent offsite. There are five such parts cleaners throughout the plant.

The electrical shop uses solvents for cleaning. The rags are collected in a waste receptacle and eventually sent to the blast furnace. Mr. Potts examined the area to see if RCRA listed solvents were in use. He did not observe any. Mr. Potts warned ASARCO that rags used with listed solvents would be considered a hazardous waste.

The paint shop has a satellite storage area for paint wastes. Mr. Nichol inspects the satellite area every month and records the amount of waste in the drum. When the drum is full it is sent offsite for diposal.

The mechanic's shop is where plant vehicles are repaired. Used oil, spent batteries, spent anti-freeze and spent Stoddard solvent are generated here. The used oil is collected and shipped off site to a used oil handling facility. The batteries are collected by the supplier of new batteries. Used anti-freeze is stored in a barrel in the shop. The particulates are allowed to settle out and then the anti-freeze is recycled. The waste Stoddard is handled in the same manner as at the mechanical shop.

Secondary Materials - The inspection team toured the secondary materials storage area located south of the ore storage and handling building. The team asked to see any Lantz lenses materials if possible. Most of the materials in this area are stored outside on an eight inch thick concrete slab. The slab is cracked and broken in numerous places. The yard is wet down and sealed with M121 sealer by Nalco routinely to minimize dust. Materials from the 1989 Process Pond Superfund clean up are not on the concrete pad. ASARCO has 15 years to smelt these materials under the Superfund Record of Decision.

The inspection team discussed the following materials with ASARCO: lower lake sediments, blast furnace baghouse dust, and excavation materials. Approximately 200 tons of lower lake sediments are generated a month under Superfund. The sediments are smelted for metals recovery.

The baghouse dust is produced in the blast furnace baghouse. This material is cycled through the baghouse (via the blast furnace) repeatedly until the cadmium concentrations are high enough to allow cadmium recovery. When the cadmium concentrations reach the ideal level, the dust is sent to Encylce in Texas for further processing.

The excavated materials are from construction required for compliance with the State Implementation Plan. The excavated materials are added to the smelting process as a fluxing agent.

The inspection team also observed the following materials in the secondary materials storage area: a pile of burned acoustical tiles (Mr. Nichol did not know the source or use of these), cathode ray tubes (CRTs), which contain up to 30% lead, scrap iron, and secondary materials from ASARCO's sister plants.

The inspection team did not observe any Lantz Lenses material.

Waste water handling system - Mr. Nichol described the waste water generation and handling. Process gases from the sinter plant are passed through an electrostatic precipitator to remove large particulate. The gases then pass through the open and packed scrubbers. This generates a wet gas stream. The gas stream contains too much water to be processed in the acid plant, so it is sent to a mist precipitator. The end result is an optically clear gas stream which is sent to the acid plant where ASARCO manufactures 93% sulfuric acid.

The water from the scrubbers contains particulate. This water is sent to two clarifiers, The sludge generated on the clarifiers is sent to a filter press, where filter cake is produced. This filter cake goes contains approximately 60% lead and is sent directly to the blast furnace to be smelted. The water from the clarifiers can then go to any of three places, back to the scrubbers, to the sinter plant, or to the high density sludge plant (HDS).

A second water stream is generated by the acid plant scrubbers. One part water from the acid plant scrubbers is mixed with nine parts plant water and sent to the HDS plant. This water is neutralized with soda ash. The water is then sent to a filter press. The filter cake generated in this process is high in sulfur and low in metal content and must be sent through the sinter plant prior to being used as a fluxing agent.

The acid plant scrubber filter cake and the HDS filter cake are stored in bins. The filter cake routinely spills when the bin doors are opened. The area under the doors is lined with a concrete slab and there is equipment readily available to pick up spillage.

The HDS water tank system was built in 1993 and meets RCRA tank specifications. There is adequate secondary containment and a leak detection system. Accumulations of rain water are removed using a vacuum truck. Mr. Nichol was not sure if the tanks had been certified by an independent professional engineer. The tanks are not visually inspected on a daily basis.

The inspection team observed the equipment washing facility. There is a forty foot long sump with sprayers for washing the underside of vehicles. The sump is emptied out with a vacuum truck. The water is sent to the HDS facility for treatment.

Thornock tank is a 93,000 gallon steel tank that was built in

accordance with RCRA tank rules. The tank replaced Thornock lake. Sinter plant washdown water and other waste stream are sent to this tank. The tank has a weir wall and is used for settling. Water is then recirculated in the plant water system. The vacuum truck removes the sediments which are dried and resmelted. The tank is emptied once every nine to twelve months. ASARCO maintains records of how much sludge is removed from the tank. This tank was certified by an independent professional engineer. The tank is not visually inspected on a daily basis.

Street sweepings disposal - Mr. Nichol described the street sweeping program and sweepings disposal methods. There are three street sweepers in East Helena. A Terravac sweeper is used in conjunction with the residential soil removal in East Helena. The sweepings from this sweeper have always been disposed of in the east field. The sweepings are mixed in with the soils removed from residential yards. This practice continues today. Mr. Nichol stated that he believed this procedure was approved under Superfund.

The other two sweepers work together in East Helena and are a lead control strategy under the State Implementation Plan. The sweepings from these sweepers are sent to the ore storage and handling building for smelting.

At 12:30 the inspection team reviewed files and conducted a brief exit meeting. Mr. Potts discovered that two waste manifest forms has not been filled out completely. However, since ASARCO is a conditionally exempt small quantity generator, manifesting is not a requirement and this is not considered to be a violation.

Mr. Knatterud discussed tank requirements under RCRA. He told Mr. Nichol that he could not make a regulatory determination on ASARCO's tanks without further review of the RCRA tank rules.

Mr. Knatterud explained that secondary materials that would test hazardous must be stored properly, and that placement on the ground could constitute disposal.

Ms. Zazzali asked about runoff from the secondary materials storage area. Mr. Nichol informed her that this was allowed under a permit from the Water Quality Division.

At 1:00 PM the inspection team departed the facility.

POSSIBLE VIOLATIONS IDENTIFIED

- Disposal of sweepings in east field may have required disposal permit and could be considered a Land Ban violation. TCLP results on some sweepings show that the material would be hazardous, however it is not clear if theses are the sweepings placed in the east field. ASARCO asserts that this material handling is exempt under Superfund cleanup.

- ASARCO is handling a number of secondary materials in a manner that may not be in compliance with RCRA regulations. EPA will follow up on each of these items with a Section 3007 Request for Information to determine if the claim of recycling is legitimate. The items of most concern are arsenical dust, blast furnace baghouse dust, street sweepings and filter cake.

- EPA agrees with the state's interpretation that secondary materials that would test hazardous must not be stored on the ground. Characterization of the materials placed on the ground is required prior to determining if this is a violation.

- ASARCO presently is designated a conditionally exempt small quantity generator. More information is required to determine if this status is appropriate for every month. Is the lab waste that is flushed down the drain included? If this is included with the paint and solvent wastes would ASARCO be considered a small quantity generator? Did ASARCO accurately represent all hazardous wastes generated onsite? It might be appropriate to request acquisition records for materials used in paint shop, mechanical shop, electrical shop and mechanic's shop. If ASARCO was a small quantity generator the months that waste manifests were improperly filled out, that would be a violation.

September 7,1995
Date of Inspection Report

Susan A. Zazzali
EPA Inspector

cc: Richard Knatterud and Bill Potts, DEQ-WMD
Suzanne Bohan and Elyana Sutin, ORC
Paul Montgomery, 8MO

FCD: September 7, 1995:

FILE IN INSPECTION FILE

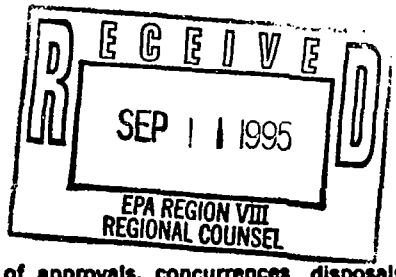
ROUTING AND TRANSMITTAL SLIP Date 7 Sept 95

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Suzanne Bohan, 8RC		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

This was a state oversight inspection, Therefore the report will not be sent to ASARCO



DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Bazzali 8MO	Phone No.

5041-102

* U.S. GPO: 1988 — 201-759

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206